

REMARKS

This is in full and timely response to the Office Action mailed on March 10, 2006.

Because June 10, 2006, the third month after the mailing date of the Office Action, falls on a Saturday, the period for response is extended to June 12, 2006, which is the next day that is neither a Saturday, Sunday nor a Federal holiday in the District of Columbia.

Reexamination in light of the following remarks is respectfully requested.

Claims 1-6 and 11-23 are present within the above-identified application, with claim 1 being independent. *No new matter has been added.*

Rejections under 35 U.S.C. §103

Paragraph 4 of the Office Action indicates that claims 1, 2, 4, and 5 have been rejected under 35 U.S.C. §102 as allegedly being anticipated by Japanese Patent Application No. 2000-062408 (JP '408).

Paragraph 5 of the Office Action indicates that claims 1, 2, 4, and 5 have been rejected under 35 U.S.C. §102 as allegedly being anticipated by International Publication No. WO 02/085648 to Tsihla et al. (WO '648) or, alternatively, U.S. Patent No. 6,343,843 to Nishikawa (US '843).

Paragraph 7 of the Office Action indicates that claims 3 and 6 have been rejected under 35 U.S.C. §103 as allegedly being unpatentable over WO '648 in view of European Patent Application 1 092 567 (EP '567) and U.S. Patent Application Publication No. 2001/0007268 (US '268) or, alternative, Nishikawa in view EP '567 and US '268.

These rejections are traversed at least for the following reasons.

Prima facie obviousness of a claimed invention is established "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary

skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). There are three possible sources for a motivation to combine references: 1) the nature of the problem to be solved, 2) the teachings of the prior art, and 3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998).

Amended Claim 1 - Claim 1 is drawn to a pneumatic tire, comprising:

an object fixed to a tread inner surface by a ring-shaped jig made of an elastic body, the object being changed in sectional area in accordance with a position in a tire circumferential direction,

wherein the object comprises a foamed resin, and

wherein the object is pressed on a tread inner surface by elastic force exerted by a jig having an elastic modulus of 200 to 1500 Mpa.

With the pneumatic tire according to the amended claim 1, the object can be with ease attached to the tread inner surface on account of the elastic force of the jig, whereby the setting of a cavity resonance suppression device can be facilitated.

None of the cited references shows the constitution of the above amended claim 1.

Claim 3 - Within claim 3, a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

JP ‘408 - JP ‘408 arguably teaches a pair of shield objects 9 and a connection unit 10 (JP ‘408 at Figures 1, 2).

However, JP ‘408 fails to disclose, teach or suggest that a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in

the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

Further note that the Office Action fails to include JP '408 in a rejection of prior claim 3.

WO '648 - WO '648 arguably teaches the presence of a single ring 40 having ridges 44 (WO '648 at Figure 2, paragraphs [024], [026]).

However, WO '648 fails to disclose, teach or suggest that a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

US '843 - US '843 arguably teaches a pneumatic tire 1 that includes a plurality of dampers 5 (US '843 at Figure 1).

However, US '843 fails to disclose, teach or suggest an object fixed to a tread inner surface by a ring-shaped jig made of an elastic body.

Moreover, US '843 fails to disclose, teach or suggest that a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

EP '567 - EP '567 arguably teaches the presence of bulkheads 15, 15' and 15" (EP '567 at Figures 2, 3, 8, 9(a), and 9(b)).

EP '567 arguably teaches that when a distance of the radially shortest portion of the closed space 5 which is other than the portion thereof which corresponds to the ground contacting surface 17 of a tire is set to not larger than 97% (or substantially not larger than 97%), or, when the cross-sectional area of a bulkhead 15 is set to not smaller than 2.5% (or substantially not smaller than 2.5%) with respect to that of the portion of the closed space 5

which is not provided with a bulkhead, the columnar resonance frequency can be staggered effectively, and a larger noise reduction effect is obtained (EP '567 at paragraph [0036]).

However, while paragraph [0036] of EP '567 provides for the *cross-sectional area of a bulkhead 15* as being set to not smaller than 2.5%, EP '567 *fails* to teach a *sectional area changing rate of the closed space 5* being set to not smaller than 2.5%.

Moreover, no clear equivalence has been established in EP '567 between the cross-sectional area of a bulkhead 15 and the sectional area changing rate of the closed space 5.

Thus, EP '567 fails to disclose, teach, or suggest that a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

But even if a clear equivalence has been established in EP '567 between the cross-sectional area of a bulkhead 15 and the sectional area changing rate of the closed space 5, EP '567 fails to disclose, teach, or suggest bulkhead 15 being fixed to a tread inner surface (EP '567 at Figures 2, 3).

Alternatively, bulkhead 15" of EP '567 is provided on parts of the inner circumferential surface of the tire (EP '567 at Figure 8, paragraph [0031]).

However, paragraph [0036] refers to bulkhead 15, and is silent as to bulkhead 15".

US '268 - US '268 arguably teaches a flap 7 and base 8 (US '268 at Figure 2).

Within claim 3, a cavity is formed inside of the tire while the tire is fixed to a standard rim, and a sectional area changing rate of the cavity in the tire circumferential direction is set in a range of 0.25% to 40% with respect to a maximum sectional area of the cavity.

US '268 arguably teaches that the blockade area A_b by the fully risen flap 7 is must be at least 5%, preferably more than 10%, more preferably more than 15%, still more preferably more than 20% of the total sectional area A_s of the tire hollow 4 under the normally inflated

unloaded condition (US '268 at paragraph [0064]). The blockade area Ab is $H_a \times W_a$ (US '268 at paragraph [0064]).

However, the Office Action fails *to show equivalence* between the *blockade area Ab* of US '268 and the *sectional area changing rate of the cavity* found within claim 3.

Additionally, the Office Action quite possibly appears to associate the single ring 40 of WO '648 (which seems to be on the tread inner surface 22) and the flap 7 of US '268 (which seems to be affixed to a wheel rim 3).

Yet, the Office Action fails to show that the flap 7 of US '268 is fixed to a tread inner surface by a ring-shaped jig made of an elastic body.

Even still, that US '268 might incorporate a flap 7 does not render the claims obvious when there is no suggestion of mounting the flap 7 of US '268 in substantially the same manner as is mounted the single ring 40 of WO '648. See, for example, *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) and M.P.E.P. §2143.01, section "*The Proposed Modification Cannot Change The Principle Of Operation Of A Reference*."

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

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Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

Docket No.: OGW-0313

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

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Respectfully submitted,

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